FIELD RINSING OF EQUIPMENT 4.0.2

Most equipment used for sample collection and processing is field rinsed with the water to be sampled just before the water samples are collected (some exceptions are described below). The purposes of field rinsing are to condition, or equilibrate, the equipment to the sample environment and to help ensure that all cleaning-solution residues have been removed before sampling begins.[5] The Clean Hands team member is responsible for field rinsing the equipment whenever *CH/DH* techniques are used. Field-rinsing procedures are summarized below for sampling devices and for sample-compositing and sample-splitting equipment. Field-rinsing procedures are discussed in detail in Horowitz and others (1994) and Koterba and others (1995).

Field rinsing of equipment does not substitute for equipment cleaning.

Surface-Water Bottle Samplers and Bag Samplers 4.0.2.A

Sampling devices used to collect water samples from surface water are described in NFM 2. A bottle- or bag-type sampler is used for most routine sampling in streams. If a pump sampler will be used, refer to section 4.1.2, step 4B.

To field rinse a surface-water sampler:

1. Put on appropriate disposable, powderless gloves (gloves).
2. Partially fill and rinse the sampler with the water to be sampled (rinse water). Avoid getting sand in the rinse water.
3. Shake or swirl and then drain the rinse water from the sampler through the nozzle. (For bag samplers, the bag must be removed from the sampler to properly discard final rinse water.)

[5]Cleaning procedures and subsequent collection of the equipment blank are described in NFM 3.

4.0.2.B Churn Splitter

Surface-water samples commonly are composited in a churn splitter that has a funnel attached to the lid (NFM 2 and NFM 5.1.1.A).

To field rinse the churn splitter:

1. Put on gloves.
2. Pour 2 to 4 L of rinse water from the sampler into the churn splitter (churn) through the top funnel.
3. Remove the churn from the churn carrier, leaving the outer plastic bag inside the carrier. Move the churn disk up and down several times to ensure that the inside of the churn is thoroughly wetted, then swirl the rinse water vigorously in the churn.
4. Pierce a hole through the inner plastic bag to expose the churn spigot and drain the rinse water through the spigot. **If sand is present**, swirl water vigorously in the churn, open the plastic bag, and partially lift the churn cover to pour the rinse water out of the top of the churn. (Draining the rinse water through the spigot will not adequately remove sand.)
5. After the rinse water has been drained from the churn, rotate the churn in the plastic bag so that the spigot is no longer exposed. Place the inner plastic bag holding the churn into an outer plastic bag and place into the churn carrier.

4.0.2.C Cone Splitter

The cone splitter is required for specific site conditions (NFM 5.1.1.B) and is the sample splitter of choice for some water-quality data-collection programs.

To field rinse the cone splitter:

1. Put on gloves.
2. Uncover the splitter reservoir and pour or pump 2 to 4 L of rinse water into the cone-splitter reservoir.
3. Lightly tap the splitter to dislodge adhering water drops. Discard rinse water.
4. Cover the splitter.

Ground-Water Samplers 4.0.2.D

Samples of ground water from monitoring wells generally are collected using either a submersible pump, a peristaltic or valveless metering pump, or a point sampler such as a bailer, thief sampler, or syringe (NFM 2).

To field rinse a ground-water sampler:

1. Put on gloves.
2. Lower the sampler carefully through the water column in the well to the selected depth interval for sampling. **When lowering the sampler, take care to minimize disturbance to the water column and to sediments at the bottom of the well.**
   - If using a pump sampler, run water continuously through the pump and sample tubing to the waste container to achieve the equivalent volume of three equipment rinses. Field rinsing is accomplished with well purging, provided that the well will be purged with the same equipment to be used for sample withdrawal.
   - If using a bailer or other point sampler, follow the same procedure as for the surface-water bottle sampler (section 4.0.2.A).
3. Discard or contain the purge water used for field rinsing, as appropriate. Comply with waste-disposal regulations if water contaminated with toxic levels of chemicals is withdrawn from the well.